

Please amend the Claims as follows:

This listing of claims will replace all prior versions, and listing, of claims in the application:

Applicant has made a good faith effort to list each and every prior claim, including any amendments or changes thereto (or status thereof) in this "Listing" section, however, should there be any discrepancy between the previous version of a claim (or status thereof) and the listing not explicitly amended, canceled or otherwise changed by this amendment, only the previous version (and status thereof) should be referred to as the intent of the Applicant.

Listing of the Claims:

What is claimed:

1. (original) A method for protecting a span in a communication network, the span connecting a first node to a second node, the method comprising:

creating a first protection virtual path connecting the first node with the second node through at least a third node using a routing-protocol and a signaling- protocol;

monitoring a failure condition in the span; and

upon detecting the failure condition in the span,

switching automatically to the first protection virtual path, and

creating a new protection virtual path, using the routing-protocol and the signaling- protocol, for each span in the first protection virtual path, connecting two nodes at each end of the given span through at least another node.

2. (original) A method for protecting a span in a communication network, the span connecting a first node to a second node and including a working line and a protection line, the method comprising:

creating a protection virtual path connecting the first node with the second node through at least a third node using a routing-protocol and a signaling- protocol;

monitoring a failure condition in the working line;

switching automatically to the protection line upon detecting the failure condition in the working line;

monitoring a failure condition in the protection line;

switching automatically to the protection virtual path upon detecting the failure condition in both the working line and the protection line.

3. (original) The method of claim 2 wherein each span in the protection virtual path having a working line and a protection line, the method further comprising:

monitoring a failure condition in the working line in each given span in the protection virtual path; and

switching automatically to a corresponding protection line in the given span upon detecting the failure condition in the working line in the given span.

4. (original) The method of claim 2 further comprising:

creating a new protection virtual path, using the routing-protocol and the signaling-protocol, for given span in the first protection virtual path, each span connecting two nodes at each end of the given span through at least another node.

5. (presently amended) A node connecting to another node with a direct path in a communication network, the node comprising:

a path type indicator having a value of either a working type or a protecting type, adapted to specify a type of the direct path;

electronic path-specifying circuitry adapted to specify a protection virtual path;

electronic path-creating circuitry adapted to create a protection virtual path connecting the two nodes through a third node when the path type indicator being the working type; and

an automatic protection switch adapted to automatically switch traffic to the protection virtual path upon detecting a failure condition in the direct path;

wherein the electronic path-creating circuitry includes
electronic circuitry adapted to support a routing-protocol; and
electronic circuitry adapted to support a signaling- protocol.

6. The node of claim 5 wherein the electronic path-specifying circuitry includes: a designated transit list adapted to specify the protection virtual path.

7. The node of claim 5 wherein electronic path-creating circuitry comprises: electronic circuitry adapted to support a routing-protocol; and electronic circuitry adapted to support a signaling- protocol.

8. (canceled)
9. (canceled)
10. (canceled)
11. (canceled)
12. (canceled)
13. (canceled)
14. (canceled)
15. (canceled)
16. (canceled)
17. (canceled)
18. (canceled)

19. (currently amended) A smart span in a communication network comprising:

a first node;

a second node;

a span connecting the first node with the second node with a direct path;

a path type indicator, stored in one of the two nodes, having a value of either a

working type or a protecting type adapted to specify a type of the direct path;

electronic path-creating circuitry in one of the first and second nodes; and

when the path type indicator being the working type,

a protection virtual path connecting the first and second nodes through a third node,
created by the electronic path-creating circuitry, and

an automatic protection switch in one of the first and second nodes adapted to
automatically switch to the protection virtual path upon detecting a failure condition in the span
wherein the electronic path-creating circuitry includes
electronic circuitry adapted to support a routing-protocol; and
electronic circuitry adapted to support a signaling- protocol.

20. (original) The smart span of claim 19 wherein the protection virtual path comprises
an additional smart span including:

an additional direct path connecting two adjacent in the protection virtual path;

an additional path type indicator for the additional direct path adapted to change the

value from the protecting type to the working type upon detecting a failure condition in the span connecting the first node with the second node; and

additional electronic path-creating circuitry in one of the two adjacent nodes adapted to create an additional protection virtual path connecting the two adjacent nodes through at least another node upon detecting a failure condition in the span connecting the first node with the second node.

21. (original) The smart span of claim 19 wherein one of the first node and the second node includes

a designated transit list adapted to specify the protection virtual path.

22. (canceled)

23. (original) The smart span of claim 19 wherein the span connecting the first node with the second node further includes a protection line, the direct path in the span being a working line.

24. (original) The smart span of claim 23 wherein one of the first node and the second node includes an automatic protection switch adapted to switch from the working line to the protection line upon detecting a failure condition on the working line.

25. (new) The smart span of claim 19, wherein:

said routing protocol is responsible for discovery of neighbors and link status, reliable distribution of routing topology information and optimal route determination.

26. (new) The smart span of claim 19, wherein:

said signaling protocol provides the capability of establishing, tearing down and modifying connections across network nodes.